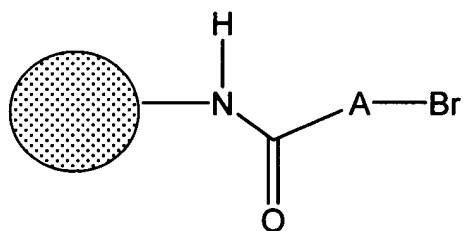


AMENDMENTS TO THE CLAIMS

Claims 1-9 (Cancelled)

10. (New) A method for preparing a supported catalyst component for the production of hollow beads of polyethylene comprising:

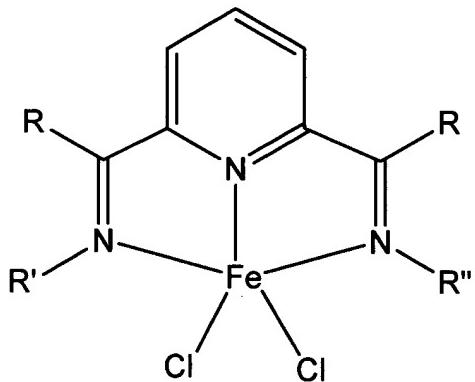
(a) providing porous functionalized beads of polystyrene characterized by the formula:



wherein:

A is a substituted or unsubstituted alkyl group having from 2 to 18 carbon atoms providing a flexible arm;

(b) dissolving an iron-based complex characterized by formula I in a solvent:



wherein:

R is an alkyl group having from 1 to 20 carbon atoms;

R' and R" are the same or different and are each a substituted or unsubstituted alkyl group having from 1 to 20 carbon atoms, an unsubstituted aryl group or a substituted aryl group having substituents having from 1 to 20 carbon atoms;

- (c) saturating the bead of subparagraph (a) with the solution of subparagraph (b);
- (d) thereafter evaporating the solvent; and
- (e) retrieving dry beads of the supported catalyst component.

11. **(New)** The method of claim 10 wherein R is an alkyl group having from 1 to 4 carbon atoms.

12. **(New)** The method of claim 11 wherein R is a methyl group.

13. **(New)** The method of claim 10 wherein R' and R" are the same and are substituted or unsubstituted phenyl groups.

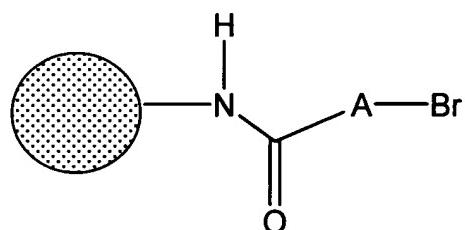
14. **(New)** The method of claim 13 wherein R' and R" are substituted phenyl groups in which the substituents are isopropyl groups in positions 2 and 6.

15. **(New)** The method of claim 13 wherein R' and R" are substituted phenyl groups in which the substituents are methyl groups in positions 2, 4 and 6.

16. **(New)** The method of claim 13 wherein R' and R" are unsubstituted phenyl groups.

17. (New) A supported catalyst component produced by the process of:

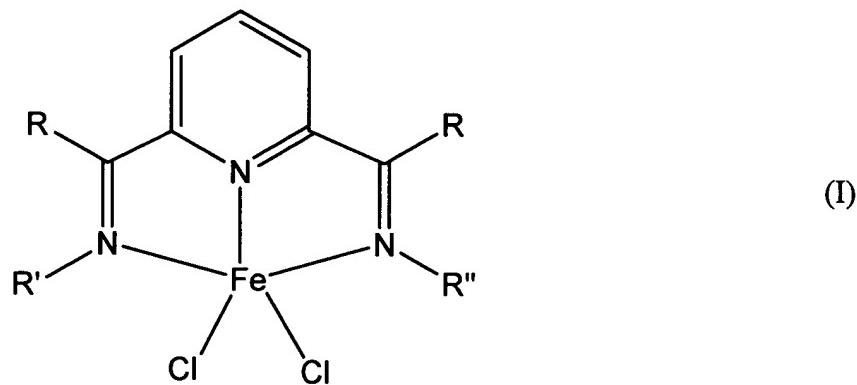
- (a) providing porous functionalized beads of polystyrene characterized by the formula:



wherein:

A is a substituted or unsubstituted alkyl group having from 2 to 18 carbon atoms providing a flexible arm;

- (b) dissolving an iron-based complex characterized by formula I in a solvent:



wherein:

R is an alkyl group having from 1 to 20 carbon atoms;

R' and R" are the same or different and are each a substituted or unsubstituted alkyl group having from 1 to 20 carbon atoms, an unsubstituted aryl group or a substituted aryl group having substituents having from 1 to 20 carbon atoms;

- (c) saturating the bead of subparagraph (a) with the solution of subparagraph (b);

- (d) thereafter evaporating the solvent; and
- (e) retrieving dry beads of the supported catalyst component.

18. **(New)** A supported catalyst system comprising the supported catalyst component of claim 20 and an activating agent.

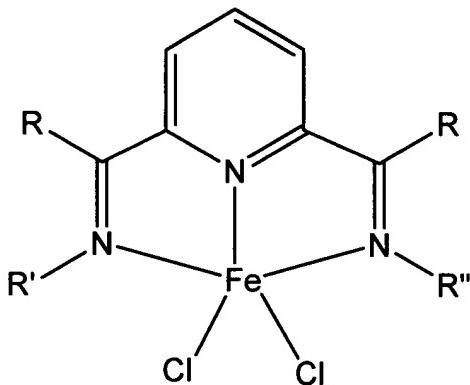
19. **(New)** The supported catalyst system of claim 18 wherein said activating agent is an alumoxane.

20. **(New)** The supported catalyst system of claim 18 wherein said activating agent is an aluminum alkyl.

21. **(New)** The supported catalyst system of claim 20 wherein said aluminum alkyl is diethyl aluminum chloride.

22. (New) A method for preparing hollow beads of polyethylene comprising:

(a) providing a supported catalyst component having a support comprising porous functionalized beads of polystyrene and a catalyst component impregnated on the support and comprising an iron-based complex of the formula;



(b) activating the supported catalyst component with an activating agent;
(c) feeding an ethylene monomer to a reaction zone containing said activated supported catalyst component;
(d) maintaining said reaction zone under polymerization conditions to polymerize said ethylene monomer; and
(e) retrieving hollow beads of polyethylene from said reaction zone.

23. (New) The supported catalyst system of claim 22 wherein said activating agent is an alumoxane.

24. (New) The supported catalyst system of claim 22 wherein said activating agent is an aluminum alkyl.

25. (New) The supported catalyst system of claim 24 wherein said aluminum alkyl is diethyl aluminum chloride.